*Demonstration lesson: ch 15*

*Developing Fraction Concepts Jamie Fowler*

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| **Representative TN State Curriculum Standards**    3rd grade:  Grade Level Expectations:  GLE 0306.2.5 Understand the meaning and uses of fractions.  GLE 0306.2.6 Use various strategies and models to compare and order fractions and identify equivalent fractions.  Checks for understanding:  0306.2.10 Understand that symbols such as ½, 1/3, and ¼ represent numbers called unit fractions.  0306.2.12 Compare fractions using drawings, concrete objects, and benchmark fractions.  State Performance Indicators:  SPI 0306.2.11 Recognize and use different interpretations of fractions.  4th grade  Grade Level Expectations  GLE 0406.2.6 Solve problems involving whole numbers, fractions, and/or decimals using all four arithmetic operations.  Checks for understanding:  0406.2.9 Compare equivalent forms whole numbers, fractions, and decimals to each other and to benchmark numbers  State Performance Indicators:  SPI 0406.2.6 Use the symbols < , > and = to compare common fractions and decimals in both increasing and decreasing order. | |
| http://img2.imagesbn.com/images/102060000/102062050.jpg | Time: 5-6 min  Throughout the book *Whole-y Cow Fractions are Fun* it asks questions about the fractions being represented in the illustrations. For the activity I will engage the students by asking these questions. |

**Virtual Manipulatives**

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| Site: <http://illuminations.nctm.org/ActivityDetail.aspx?ID=11>  Time: 3 min  Description: This allows students to explore various ways fractions can be written and represented. |
| Site: <http://www.sheppardsoftware.com/mathgames/fractions/memory_fractions1.htm>  Time: 3 min  Description: Students are asked to match the fractions with the pictures they are represented by. |

Part I: Text Book Activities

Introduction to fractions models:

Times: 4-5 min

Discuss the three types of models with students (area, length, and set). Throughout each activity have students fill out a chart with what model each activity uses. Discuss at end of lesson.

Paper Fractions:

Time: 5-6 min

Students will have multiple strips of paper the first they will write 1. The next they will fold in half and on each half they will write ½ this will continue for 1/3s and 1/4s

Activity 15.3: Class Fractions

Time: 3-4 min.

For this activity I will call a group of 4 to 6 students to the front of the class. I will ask the remainder of the students questions pertaining to the group standing up front. For instance, What fraction of our friends have brown hair? What fraction of our friends have on blue shirts?

Activity 15.4 Correct Shares

Time: 5-6 Min

For this activity I will have various fraction cards laid on the tables the students will sort the card by which ones are correctly divided into parts and those that are not. They will then explain why they placed their cards in each pile in a class discussion.

Activity 15.6 More Less or Equal to One Whole

Time 5-6 min

Students will be given a baggie of beads. A card will tell them that each piece represents 1/8 of a whole. Students will then need to figure out if they have less than a whole, equal to a whole, or greater than. They will then illustrate their answer. They will then hold up the correct card that says <1, =1, or >1.

Activity 15.10 Zero, One half, of one

Time: 5-6 min

Students will be given a sheet with 12 fractions on it. They will mark those closer to zero in red, those closer to ½ in blue, and those closer to 1 in yellow.

Activity 15.12 Ordering Unit Fractions

Time: 5-6 min

Students will be given various fractions and will be asked to put them in order from least to greatest. They will use paper plates and markers to represent the different fractions to show the order of the fractions and offer a visual. The students will be given five fractions to illustrate and put in order with their table mates.

Activity 15.16 Apples and Bananas

Time 5-6 min

Students will be given 16 red pieces and 8 yellow pieces and will be asked to group them in different ways representing equivalent fractions. There are many ways to do this so students will share their methods.

Part II. Lesson Plan: Introduction to Fractions

<http://www.centerforcsri.org/webcasts/fractions/introduction_to_fractions.pdf>

This lesson is a perfect introduction to fractions. It uses candy and full bags and partial bags so students understand fractions are part of a whole. It also focuses on where fractions go on a number line.